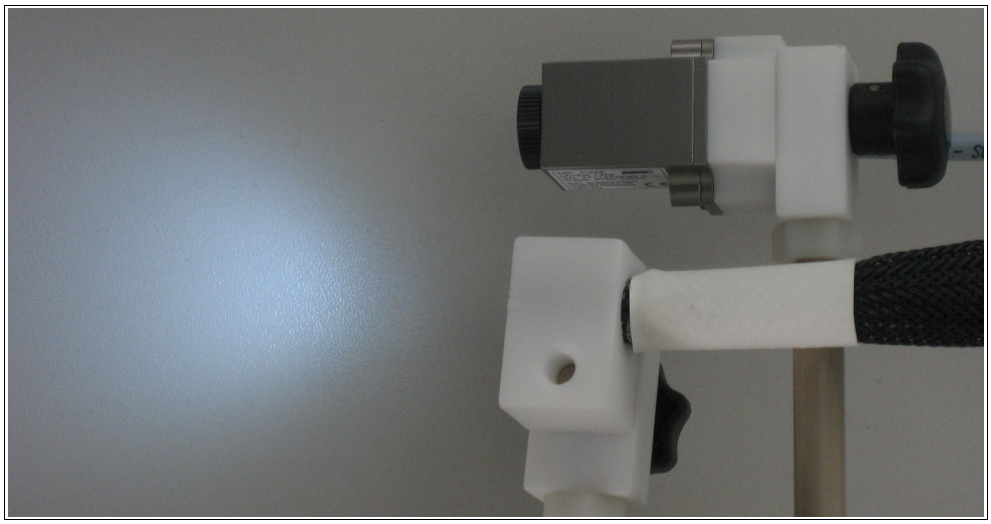
MR compatible light source

User manual

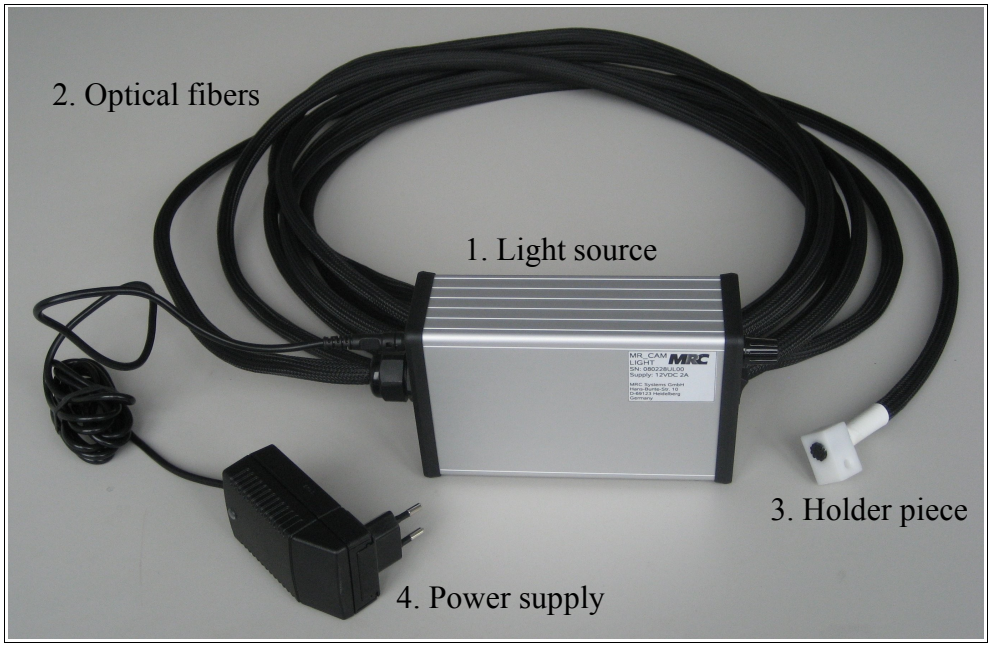


This manual describes the essential parts of the MR compatible light source for the MR compatible camera and illustrates its operation

A. System components

The light source includes an arrangement of 16 white LED´s which are directly coupled into optical fibres. The light intensity of the LED´s can be adjusted with the potentiometer on the front panel. Internally the light intensity is regulated with a pulse width modulation which runs on a frequency of about 9.7kHz.

In the following figure the main components are described.



B. Operation instructions

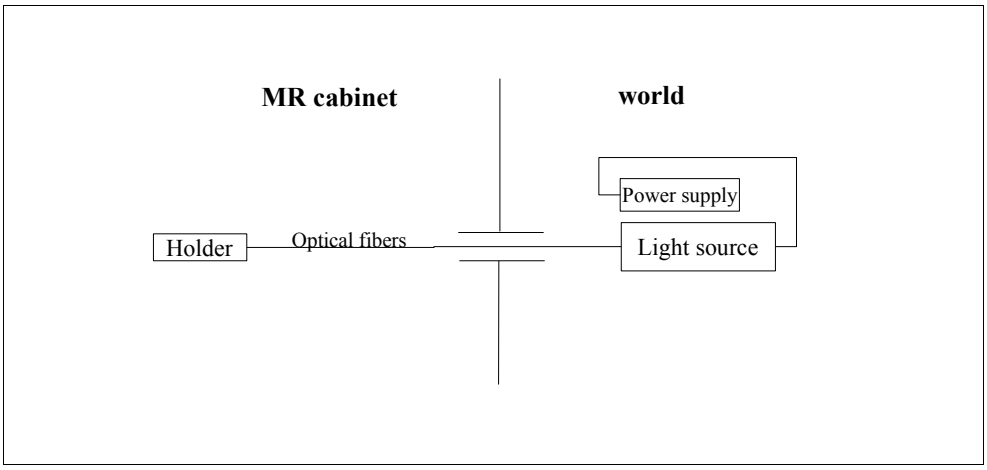
The light source must be connected with the power supply included in delivery. The corresponding plug is on the rear side.

With the corresponding switch on the front panel the light source can be turned on and off. Turning the potentiometer to the right increases the light intensity.

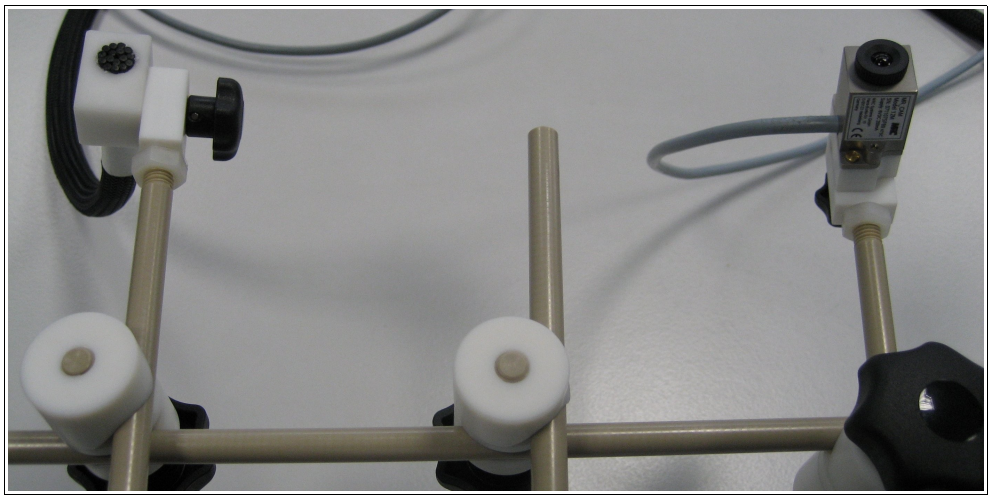
The on-state of the light source is recognizable through the ventilation holes in the front and rear panel.

C. Installation

The light source must be placed outside the MR-cabinet to prevent interference with the scanner or serious damage. The optical fibers can be brought into the MR-cabinet through a wave guide. The following diagram shows schematically the installation arrangement.



The end of the optical fibre bundle can be mounted to MRC´s articulated arm holder with a M6 screw. To achieve best results it is recommended to place the camera and the end of the fibre bundle in such a way that direct reflections on the image do not appear.



D. Technical Data

Supply:	6 VDC, 2A
Weight:	1,3kg
Dimensions of the light source:	166mm * 106mm * 56mm
Length of the optical fibres:	10m

E. Warnings

Bend of the optical fibres with a radius of less than 3cm can cause enduring damage.

The optical fibre bundle can not be removed from the light source nor from the holder piece without serious damage.

Due to the ventilation holes the light source is not water proof. Any liquid that penetrates the light source can cause serious damage to the electronic circuit.

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